

Public School Construction in MA

CM at Risk Delivery Method



Arlington High School Building Committee
12/4/18

Presentation Overview



- Construction Delivery Methods Defined
- Comparison of Design–Bid–Build vs. CM at Risk
- The CM at Risk Advantage
- CM at Risk Procurement Process

Construction Delivery Methods Defined



Types of Construction Delivery Methods:

Design – Bid – Build (Chapter 149)

Construction Management at Risk (Chapter 149A)

Design – Build (Public Works Projects)

Construction Management Agency (Not Used in MA)

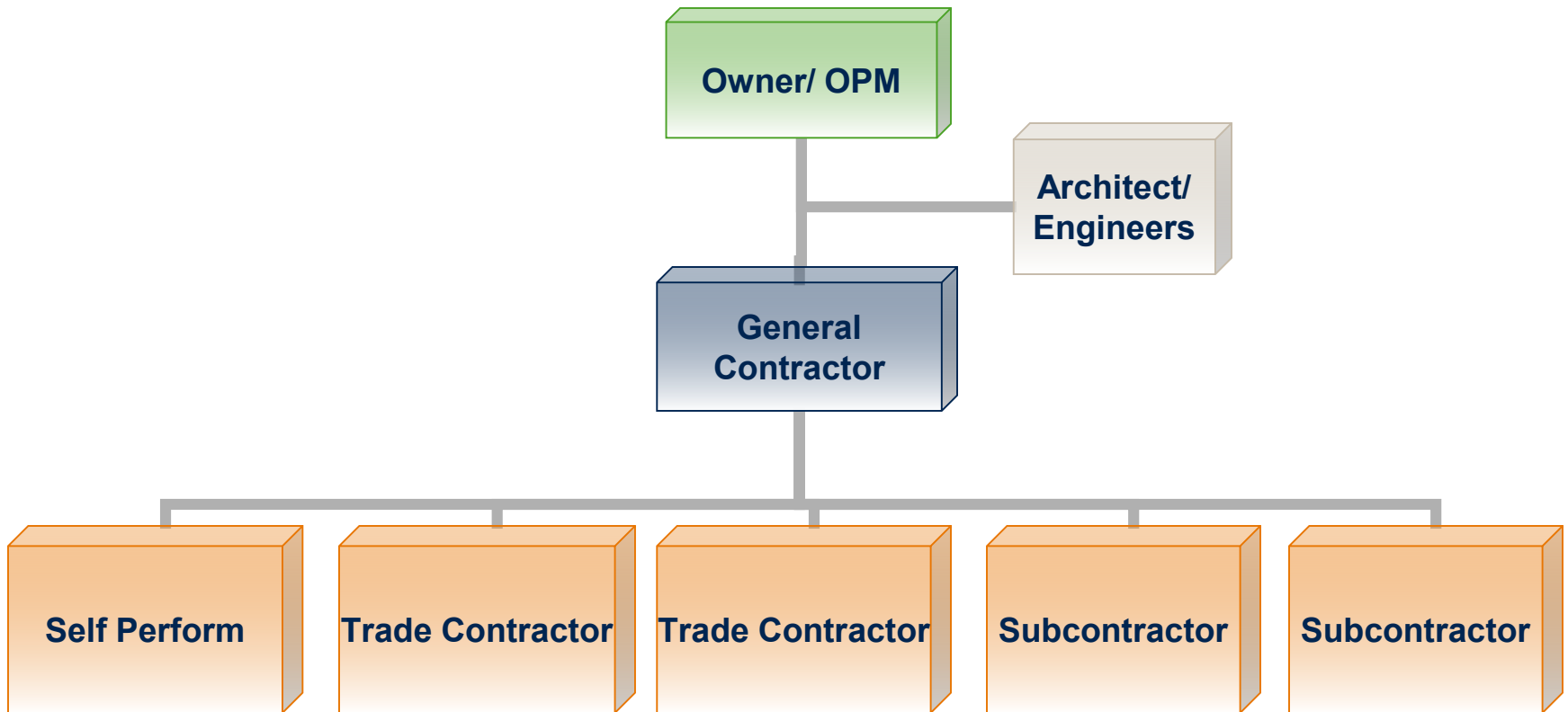
Construction Delivery Methods Defined

Design-Bid-Build (D-B-B)

- “Traditional approach” for construction of schools
- Project designed by a team of Architects and Engineers to 100% Construction Documents
- Once plans are completed, bids are solicited from General Contractors and Trade Contractors
- A complete set of design documents is finished before the builder becomes involved
- Low “responsive” bidder is awarded project
- Contract is based on a “Lump Sum” amount

Construction Delivery Methods Defined

Design-Bid-Build (D-B-B)



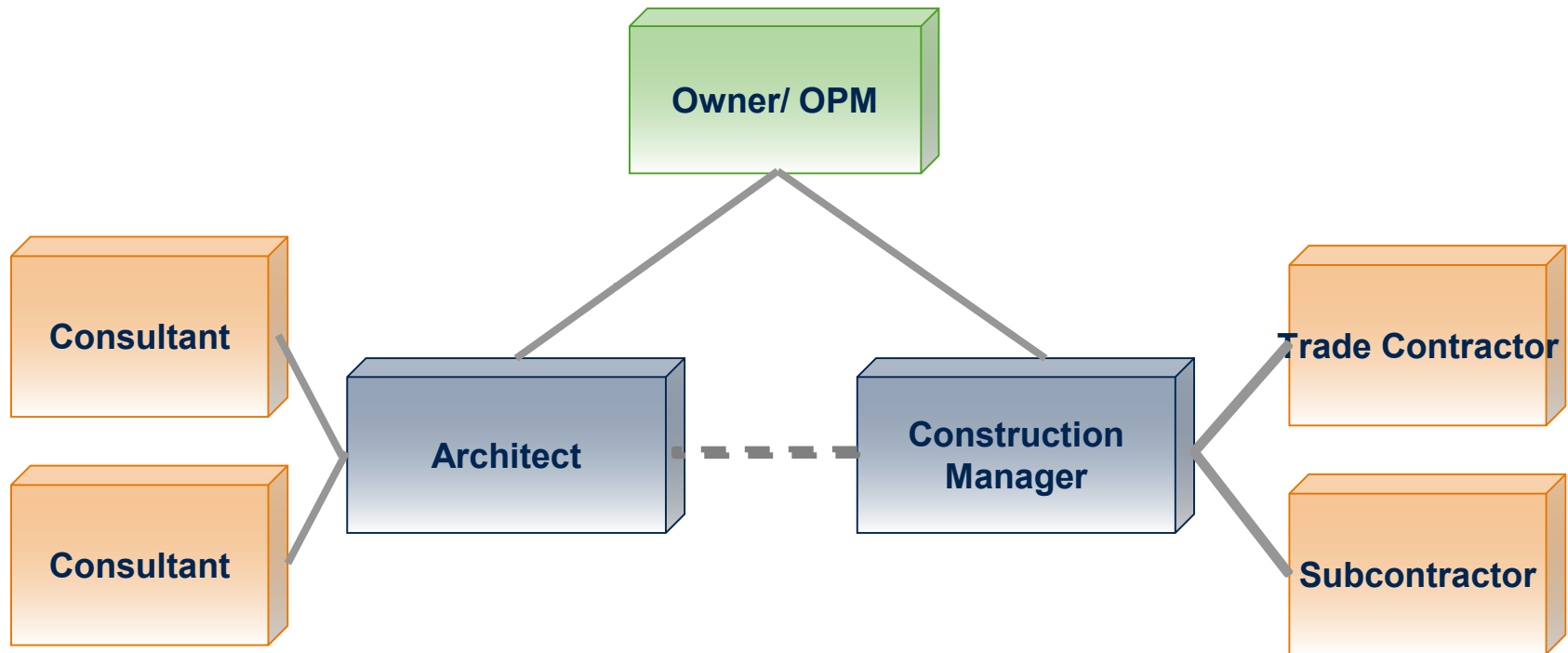
Construction Delivery Methods Defined

Construction Manager at Risk (CM at Risk)

- Hired early in design process
- CM at Risk provides design phase and preconstruction services
- CM at Risk becomes builder of project (Contractor)
- CM at Risk has ability to “drive” the entire process
- Owner participates in Trade and Subcontractor selections
- Option for phased or fast-track schedule
- Contract is based on “Guaranteed Maximum Price” (GMP)
- Open book accounting

Construction Delivery Methods Defined

Construction Management at Risk (CM at Risk)



Comparison of D-B-B vs. CM at Risk

Lump Sum vs. Guaranteed Maximum Price (GMP)

Lump Sum

- Based on cost of the work, general conditions and desired profit of GC
- Price fixed at lump sum bid amount with additions for change orders
- Price based on “plans and specs”, or exactly what is indicated on contract documents. GCs look at documents as “black and white”
- Savings on actual costs below the bid “lump sum” amount become contractor profit
- No opportunity or incentive for negotiation

Guaranteed Maximum Price

- Based on bids for work packages, general conditions, contingency and set fee
- Essentially a “cost-plus” contract with guaranteed maximum
- Final price is based on actual bids received, amount of contingency used, and agreed upon general conditions/fee
- Any savings on actual costs revert to the owner
- All items of GMP are negotiable with the exception of the CM fee and Trade Contractor Bids
- Can include allowances for work that is unclear or undefined to ensure no financial surprises

Comparison of D-B-B vs. CM at Risk

Design-Bid-Build

Advantages

- Familiar delivery method
- Simpler process to manage
- Fully defined project scope for construction
- Lowest price proposed and accepted; pricing, including contractor fee and overhead, secured competitively; “best price”
- Owner can completely control design
- **BEST SUITED FOR:** less complicated projects that are budget sensitive but are not schedule sensitive and not subject to change.

Disadvantages

- Linear process means longer schedule duration than other methods
- “Hard” price not established until bids are received; may require redesign and rebid if bids exceed budget.
- Not a schedule or budget driven process
- No builder input in design, planning or budgets
- The designer may have limited ability to assess scheduling and cost ramifications as the design is developed which can lead to a more costly final product
- Quality of Trade contractors and subcontractors not assured
- Fosters adversarial relationships between all parties and increases probability of disputes
- Prone to changes and claims which may increase final project cost

Comparison of D-B-B vs. CM at Risk

CM at Risk

Advantages

- Construction Manager selected based on qualifications, experience and proposed team rather than low cost
- Design phase assistance with budgeting, planning and constructability results in ability to influence outcome by addressing issues early
- Early cost estimates and feedback to help in the design development process resulting in a more accurate cost model
- Fast Track schedule delivery possible
- Team concept with owner and designer
- **BEST SUITED FOR:** new or renovation projects that are schedule sensitive, difficult to define or subject to potential changes; also for projects requiring a high level of construction oversight due to multi phases, technical complexity or multi-discipline coordination

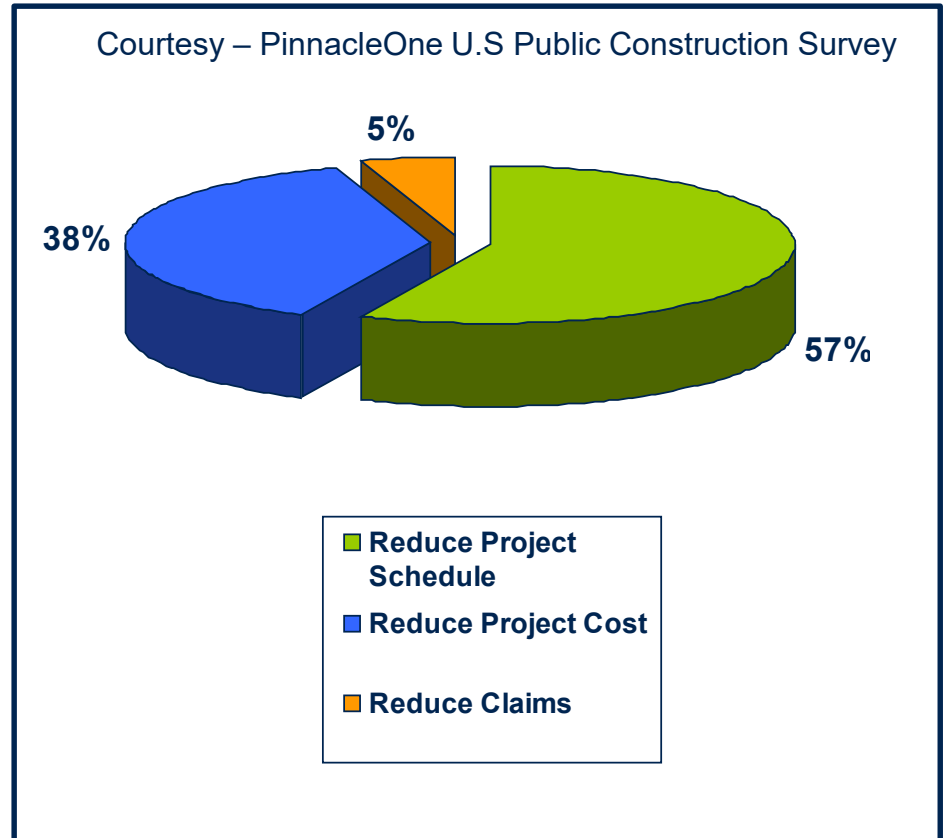
Disadvantages

- Requires an OPM or Owner with an understanding of experience in CM at Risk process and GMP mechanics
- Difficult for the Owner to evaluate the GMP and determine if best price achieved
- Potential for higher up front cost due to “filling holes” in scope and/or documents (with result of eliminating future change orders and associated delays)
- Potential adversarial relationship when design intent is challenged when “design-to-budget” or “price cutting” is pushed
- Owner or OPM must be versed in pricing negotiations

The CM at Risk Advantage

Key Drivers

- Team Approach
- Cost Factors
- Schedule Considerations
- Subcontracting
- Quality



The CM at Risk Advantage



Team Approach

- CM at Risk Process is based on relationships and teamwork
- CM at Risk motivation is project success because future work is solely tied to references and past experience
- Cost reimbursement structure and fixed fee promotes CM at Risk as advocate of owner

The CM at Risk Advantage

Cost Factors

- Fee set at time of contract. Therefore, there is no motivation for CM at Risk to “inflate” costs because savings revert to owner
- GC is motivated to find “holes” in documents to reduce bid amount and make up with later change orders
- CM at Risk’s involvement in preconstruction is to assist design team in maintaining budget and optimizing value/constructability
- Continuous budget feedback and control
- Open book accounting and purchasing
- Ability to obtain GMP earlier in process than traditional bid
- More ability to handle change in design and scope
- Minimizes changes and claims once in construction

The CM at Risk Advantage

Schedule Considerations

- Builder's viewpoint on "how to build" for planning and logistics integrated into design
- Opportunity for fast-tracking and pre-purchase of equipment
- Design-phase input allows for facilitation of biddable fast-track package documents

Traditional Approach



Fast Track Approach



The CM at Risk Advantage

Subcontracting

- CM at Risk leads subcontractor bidding and manages bid process
- CM at Risk involvement in prequalification of Trade Contractors
- Allows owner “screening” of subs through review of bid lists and qualifications
- Significant bid coverage for all trades due to CM at Risk relationships in marketplace
- With GC process, Filed Sub-Bidders do not know who GC is at time of bidding
- Ability for CM at Risk to create specific scopes of work for subcontractors as basis for bidding
- Early involvement and knowledge of project helps CM at Risk mitigate gaps in purchased scope
- Ability to perform “scope debriefs” to ensure bidder understanding of documents and expectations

The CM at Risk Advantage

Quality

- CM Selection process is based on qualifications, experience, proposed team and success on past projects
- Lump Sum process promotes cost cutting to increase profit
- With General Contracting, heavy owner involvement is required to ensure no “cutting corners” on quality
- GC bids are based on “plans and specs” with no opportunity for scope clarification
- CM early involvement in project leads to greater understanding of complex logistics and design details
- Review of constructability during design phase utilizes builder’s knowledge of means and methods and subcontractor abilities to ensure a design that will result in a “buildable” high quality product

Massachusetts Construction Reform

Chapter 193 of the Acts of 2004

“An Act Further Regulating Public Construction in the Commonwealth”

- Enacted July 19, 2004
- Most comprehensive construction reform since 1981
- Higher thresholds for general and filed sub-bidders
- DCAMM Certification requirements for filed sub-bidders
- Prequalification requirements for bidders and sub-bidders
- OPM requirements
- MBE/WBE requirements
- New Statute: Chapter 149A to permit the use of the Construction Management at Risk alternative delivery method

Massachusetts Construction Reform

Chapter 149A

- Allows for the use of CM at Risk for building contracts of \$5 Million or more
- Requirement for advance approval by the Office of the Inspector General (IOG) to use CM at Risk
- Two phase process for selecting CM: Prequalification & Proposal
- Two part proposal: Technical and Price
- Agency contracts with highest ranked firm with which committee concludes successful “non-fee” negotiations
- *Office of the Inspector General (IOG) October, 2009 Report to the Legislature on CM at Risk and Construction Reform.*
<http://www.mass.gov/ig/creform/refinfo.htm>

CM at Risk Procurement Process

Criteria for Inspector General approval

The Office of the Inspector General will issue a Notice to Proceed when the public agency has demonstrated that:

- a. The public agency has authorization from its governing body to enter into a contract with a construction management at risk firm. The authorization shall include the results of any public vote if applicable.
- b. The public agency has the capacity, a plan and procedures in place and approved of by the governing body, where appropriate, to effectively procure and manage construction management at-risk services for the specific project and has retained the services of a qualified owner's project manager.
- c. The public agency has in place procedures to ensure fairness in competition, evaluation and reporting of results at every stage in the procurement process.
- d. The building project has an estimated construction value of \$5,000,000 or more.
- e. The public agency has determined that the use of construction management at risk services is appropriate for the building project and states in writing the reasons for the determination.”

CM at Risk Procurement Process

District Engagement in Procurement Process

1. Establish prequalification committee (OPM, Designer, at least two public representatives)
2. Prepare and advertise RFQ
3. Evaluate responses and prequalify at least three CM at Risk Firms
4. Establish a selection committee (can be same as prequalification committee)
5. Prepare RFP and distribute to prequalified firms
6. Receive, evaluate and rank proposals (interviews are permitted if conducted with all proposers)
7. Negotiate non-fee terms with selected proposer and award contract

In Summary

CM at Risk creates the opportunity to...

- Hire a sophisticated, experienced team member based on qualifications
- Save time on the schedule through fast tracking and pre-purchase
- Design a “buildable” building with a great deal of thought about value, quality, durability and user benefits
- Manage the budget process and see all costs via open book accounting
- Have a greater opportunity to select and prequalify subcontractors for the project resulting in significant quality improvement
- Reduce changes and claims through preconstruction involvement, design-to-budget, and effective purchasing and scope delineation
- Engage in a positive and collaborative design and construction process
- Gain an advocate looking out for your interests